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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,717	05/11/2001	Byoung-Sun Na	06192.0226.AA	5193

7590 01/05/2007
MCGUIRE WOODS LLP
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EXAMINER

ERDEM, FAZLI

ART UNIT	PAPER NUMBER
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2826

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/05/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/852,717

Applicant(s)

NA ET AL.

Examiner

Fazli Erdem

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-20 is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-9, 21, 22 and 25-39 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 10, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/19/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Arguments regarding the election restriction issued by the examiner 9/13/2006 have been fully considered and they are found to be persuasive. Therefor, restriction requirement issued on 9/13/2006 is hereby withdrawn.

Allowable Subject Matter

1. Claims 11-20 allowed.
2. Claims 4, 5, 10, 23 and 24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 6-9, 21, 22 and 25-39 rejected under 35 U.S.C. 103(a) as being unpatentable over Kishimoto et al. (6,266,122) in view of Kishimoto et al. (6,281,960).

Regarding Claims 1, 7 and 32 Kishimoto et al. ('960) disclose a liquid crystal display device and method for manufacturing the same where in Fig. 4, it is disclosed a transparent/glass substrate 2 having a flat surface, a transparent electrode/pixel electrode/color filter 8B, formed on the flat surface of the insulating substrate, black matrix BM and formed on the transparent electrode. Kishimoto et al. ('960) fail to

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disclose the required black matrix and then the protrusion. However, Kishimoto et al. ('122) disclose a semiconductor device where in Fig. 8A, protrusion consists of a bottom base layer 76 followed with columnar layer 90.

It would have been obvious to one of having ordinary skill in the art at the time the invention was made to include the required bottom layer followed with a columnar structure in Kishimoto ('60) as taught by Kishimoto et al. ('122) in order to have an ease of manufacture as disclosed in column 2, lines 34-65, column 3, lines 2047, column 4, lines 2023, and column 8, lines 1-25.

Regarding Claim 2, BM of Kishimoto ('960) is photosensitive.

Regarding Claims 3 and 34, column 2, lines 34-65, column 3, lines 2047, column 4, lines 2023, and column 8, lines 1-25 of Kishimoto ('122) disclose the photolithography process.

Regarding Claim 6, 37 and 38, in ('960) BGR is a color filter/pixel/transparent electrode.

Regarding Claim 8, RGB layer 8b of ('960) is over transparent/pixel electrode.

Regarding Claims 9 and, RGB layer 8B of ('960) is over transparent electrode.

Furthermore, in 8A of ('122) layer 70 is over layer 73.

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Regarding Claim 21, Fig. 11 of ('122) has light blocking layer 510.

Regarding Claim 22 black matrix layer BM in both ('960) and ('122) are photosensitive.

Regarding Claim 25, if the configuration of 8A of ('122) application, applied to BM configuration of ('960) then one would have a base layer 76 and top layer 90 of both black matrix material.

Regarding Claims 26 and 27, Black Matrix layer in both references are photosensitive.

Regarding Claim 28-30 and 39, in ('960) RGB 8b is a electrode/color filter and in Fig. 8A of ('122) application, layers 73 and 70 are color filter/electrode

Regarding Claim 31, both BM layer of ('960) and layers 76/90, divide the pixel region into plurality of regions.

Regarding Claim 33, BM layers 12b and 12c surround the pixel electrode.

Regarding Claim 35 and 36, in both ('960) and ('122) black matrix layer is an organic/photosensitive layer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fazli Erdem whose telephone number is (571) 272-1914. The examiner can normally be reached on M - F 8:00 - 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wael Fahmy can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FE

December 26, 2006


EVAN PERT
PRIMARY EXAMINER